8. TROUBLE SHOOTING

The following problems have been observed:

1. Sysadmin forgets the password
2. Unit UICs are not found (UICs are needed to display the SOF (Status of Forces) button bar when a unit is selected)
3. Users cannot log in to ELVIS
4. The browser BACK button doesn't retrieve the previous HTML document and/or resizing the browser window causes the browser to fail to re-display the current HTML document.
5. HP installation problems in a GCCS environment
6. A "socket error" is displayed whenever a user attempts to access a tactical display (e.g., from a wall chart in the VCC).
7. Meteorological weather images are not available
8. Microsoft's Internet Explorer displays error messages when zooming or performing a rng/brg calculation.
9. Miscellaneous

1. Sysadmin Password

A utility is provided to reset the system administration password to the default "vinson". The executable is */h/LVIS/progs/LVISSA_ResetPasswd*. No parameters are required. This file has root protection.

To run this utility, launch an xterm and "su -" to jmcis or jotsii (check the /etc/passwd file to verify which user account has user ID 800); be sure to use the tack "-" option to inherit the proper environment. Now, "su" to root without the tack "-" option and run LVISSA_ResetPasswd.

2. Unit UICs Not Found

This only applies to sites that are running the WEBSOF application. WEBSOF generates HTML documents from the JMCIS/OSS Oracle database.

When a unit is selected, a lookup table (called units.txt located in /h/LVIS/data) is used to associate the unit name, type, and hull with a UIC. The UIC provides the link to the SOF data. If the UIC is found in units.txt, then a SOF button bar is provided to allow access to SORTS, CASREP, MOVREP, and EMPSKD data (this does not guarantee the presence of data, but only the likelihood).

The system administrator can edit units.txt (using any text editor which will not insert special word-processing tags for formatting) to add or modify entries. The alphabetical ordering and format of the file must be preserved (since a binary search is used on unit name, with a secondary check on type-hull). A future release of ELVIS will provide a browser-based tool to update this file.

3. User Login Problems

Assuming that the user has an ELVIS account (remember that an ELVIS account is independent of a Unix account) and has correctly entered the login and password (case sensitive), then verify the following:

- UB is running
- The process GDbm is running
- The file /h/LVIS/data/etc/02 is owned by jotsii (or any user with ID 800).
- There is a link from the directory */h/data/global/UB/GDbs/LVISUsers* to the directory */h/LVIS/data/global/UB/GDbs/LVISUsers*

Note that the sysadmin can re-enter the user's password to verify that the password is being used correctly. Alternatively, the sysadmin may elect to delete the user's account and then re-add the account, but this process will remove all saved maps built by the user.

4. Browser Failure

If two browsers are being used (possibly on different hosts) which share the same cache, then problems may occur as each browser attempts to store/retrieve data from the cache. This problem may appear in various forms, such as an inability to resize the browser window (without having to reload the data) or the failure of the browser's BACK key to retrieve previous documents. Typically an error message will be displayed when the browser is first launched warning of a potential conflict with the cache (so be sure to read all warning/error messages that the browser displays).

The easiest solution is to configure the browser to use a different cache (consult the browser's documentation for details on setting the cache).

5. HP Installation Problems in a GCCS Environment

In the usual GCCS configuration for Solaris, NIS+ provides user accounts to all workstations, but not /etc/services. However, HP's implementation of NIS is not as flexible and /etc/services cannot be deselected. Hence, when ELVIS is installed on an HP workstation, the /etc/services file is updated, but these changes are not reflected in the /etc/services file provided by the HP NIS server. Hence, the following steps must be performed on the HP NIS server:

1. Copy/move the /etc/services file to /h/EM/nis_files

2. Modify the /h/EM/nis_files/services by adding these three lines of ELVIS services (it may be easiest to copy these lines from /etc/services on the ELVIS server).

   ```
   LVIS_gdbm          2452/tcp
   LVIS_track-man     2451/tcp
   LVIS_map-server    2450/tcp
   ```

3. As root, type: /usr/etc/yp/ypmake DIR=/h/EM/nis_files services

4. As root, type: ypcat services | grep LVIS (to verify that the changes were made)

5. On the ELVIS server, log out and then log in.

6. "Socket error" when accessing tactical displays

There are several potential sources for "socket error" problems.

- Verify that UB is running on the ELVIS server.

- If ELVIS was installed using the program TestInstall instead of using a segment tape (via the sysadmin login), then it is possible that the wrong version of ELVIS was installed. Importantly, there are distinct ELVIS 1.3.1 segment tapes for UB 2.1.2.2 and UB 2.2.0.5. Similarly, there are distinct ELVIS 1.3 segment tapes (precursor to version 1.3.1) for UB 2.1.2.2 on HP-UX and Solaris.

  The TestInstall program does not perform the requisite version checks, so it is possible to install ELVIS 1.3.1 (for UB 2.1.2.2) on UB 2.2.0.5. The normal installation process (via the sysadmin login) performs version checks automatically to prevent version mismatches.

- For installations in a GCCS environment, Section 5 (above) addresses problems with HP's NIS which can cause socket problems.

- ELVIS version 1.3 had a bug (which has been fixed in version 1.3.1) that caused several ELVIS processes to abort if the directory /home2/mapdata was empty. If version 1.3 is installed, then this bug is easily circumvented by adding a DMA map (via the UB map options menu).

7. Meteorological images are not available

There are several systems that can produce MIF (METOC Image Format) files, e.g., NITES and TESS. If MIF files are available, then the following procedures can prepare these files for display by ELVIS.

1. Copy xxx.mif to /h/TESS/NITF/data

2. Type: mif2map /h/Tess/NITF/data/xxx.mif /home2/mapdata/xxx.map

   (Notes: ELVIS and UB both use /home2/mapdata for map storage. The path name of the original .mif file is embedded in the .map file, so don't remove the .mif extension or relocate the .mif file. Also, mif2map is a NITES utility program and it is not part of the standard UB software release).

3. Type: cd /home2/mapdata
   Type: mkmapdir

   (Note: mkmapdir registers all valid maps in the mapdata directory with UB. ELVIS inherits this registration automatically.)

4. Logout out of UB and then back in

5. Verify that the maps appear under in ELVIS, under the CUSTOM MAPS option (these maps will be in the bottom scroll list.

8. Microsoft's Internet Explorer error messages from ELVIS zoom and rng/brg operations

MS Explorer may not correctly perform the zoom and rng/brg operations, and different versions of Explorer fail in different ways. ELVIS 1.3.2 has been modified to compensate for these problems, but future updates to MS Explorer (or other browsers) may introduce new problems. Hence, this trouble-shooting section is retained to provide insight into (and an audit trail for) previous browser-generated problems.

Using MS Explorer against ELVIS 1.3.1.x, an error window is presented after the first mouse click on the tactical display (when performing a zoom operation, a rng/brg operation, or clicking on the display away from any track symbol or track name). By OKing the error window, the user can continue with the intended operation. In other cases, Explorer displays a message "The

shortcut ..... does not have a target". By clicking the back arrow (for the browser cache), the user can continue with the intended operation.

For background, the purpose of the first click (for zoom and rng/brg) is to register the initial "anchor" point for the operation. The web server responds to the first click with a status code of 204 (i.e., the server has fulfilled the request, but there is no new information to send to the browser - see section 7). Unfortunately, the Explorer appears to expect data based on a 204 code, which then produces an error when no data is forthcoming. There is no solution to this problem; Microsoft needs to correct the browser response to code 204.

9. Miscellaneous

This section lists some of the lessons learned, as reported from ELVIS sites.

- Ensure the file /etc/X0.hosts contains the localhost name.

- Ensure the script /h/LVIS/progs/LVIS_Start.csh contains the line:

  ```
  xhost + `uname -n`
  ```

- If user files (under /h/LVIS/data/pub/users) are not being removed after 24 hours, verify that there is an entry in /usr/spool/cron/crontabs/root to launch the garbage collection program, e.g.,

  ```
  0 5 * * * /h/LVIS/progs/LVISSA_GarbageColl > /dev/null 2>&1
  ```

  If security auditing has been activated, then ensure that the file /usr/spool/cron/cron.deny has the correct entry.

- If file permission or ownership problems are suspected, refer to the file /h/LVIS/SegDescrip/PostInstall for how these are configured.

- Although it is generally discouraged, system administrators may occasionally perform trouble shooting by running executables manually from an xterm. In order to run any of the ELVIS cartographic executables (on a single-eye host), the following environmental variables must be set.

  ```
  MapTmp      /tmp/vids/unix:0
  MapService  LVIS_Chart
  ```

- If the access log shows IP addresses vice DNS (Domain Name Service) names, then verify that the file /etc/resolv.conf (if it exists) is "world" readable.

- If the browser cannot find the ELVIS host and DNS is being used, then try removing the file /etc/resolv.conf (i.e., rename it) and add the ELVIS host to /etc/hosts.

- When running UB 3.0.1.x and ELVIS 1.3.x, it may be necessary to increase the swap space from the default (126 MEG) to 300 MEG (or more). Error messages like "not enough space" will be displayed.

- Be sure to give ELVIS sufficient time to initialize before accessing data via a browser. The time period depends on the performance of the CPU, so it is difficult to give specific numbers, but it may be appropriate to wait 1-2 additional minutes once UB has completed booted.

- Verify that the file /h/AcctGrps/SecAdm/data/Exec/User/JMCIS contains the following lines:

```
bg          :QueryServer
bg          :AlertNotifier
bg          :COEStartSession  Chart
bg          :LVIS_Start.csh
```

  Verify that the file /h/AcctGrps/SecAdm/data/Exec/User/JMCIS.close contains the following lines:

```
bg          :LVIS_Shutdown
bg          :COECloseSession  Chart
```

- ELVIS has four map configuration directories /h/data/local/UB/Charts/STANDARD* (where * is 1, 2, 3, and 4); these correspond to the four ChartGrab processes. Although these directories should not become contaminated through normal system operations, it is possible that abnormal conditions may cause a problem. To remove these directories, log out of GCCS/JMCIS (on the ELVIS server) and, at the GCCS/JMCIS prompt, login in as root and remove the directories (i.e., rm -rf /h/data/local/UB/Charts/STANDARD*). When finished, login normally and ELVIS will automatically recreate these directories.